




## Iowa Water Monitoring Atlas

by Cam Conrad and Joost Korpel, Iowa Geological Survey, IDNR

The Iowa Department of Natural Resources (IDNR) just finished developing a new website for IOWATER volunteers and staff. The Iowa Water Monitoring Atlas is the latest internet tool designed to bring up-to-date water quality information to the public effectively and efficiently. Some of the water quality related datasets that you will find in the Atlas website include: IOWATER volunteer monitoring site locations, Iowa STORET site locations, wastewater treatment plant locations, Iowa's watershed boundaries, and Iowa's lakes and streams.

Getting to the Iowa Water Monitoring Atlas is easy. Go to the IOWATER website at [www.iowater.net](http://www.iowater.net) and click on the "Data Base" link in the top menu. When the drop-down list appears, select "Interactive Mapping" and choose "Iowa Water Monitoring Atlas." The IOWATER monitoring sites are displayed as blue points on the map when you first enter the website. To find out water quality information for a particular IOWATER site, click on the **Identify**  button in the toolbar near the top of the page, as seen in Figure 1. Click on the **Help** link in the top-right of the site to get help with using the "Identify" button and any other site feature. After selecting "Identify," click on an IOWATER site with your mouse. A table with information about the site will be displayed in a new window. Notice that the number in the "Site Number" field is underlined. You can click on the number to access the site log.

Unlike a database-driven website, the Iowa Water Monitoring Atlas allows you to view water quality data through the use of a map. Several map layers are included on the site to provide the user with points of reference, including county boundaries of Iowa, town/city boundaries, interstates, U.S. and state highways, urban and rural roads, township boundaries, and section boundaries. Most layers are labeled to make it easy to find out where you are in the state.


Not all of the layers are available or visible when you first enter the website – they require the user to zoom in on the map before they are displayed. You can use the **Zoom In**  button to accomplish this task. This button is located in the toolbar near the "Identify" button, and is the



Figure 1. Toolbar for Iowa's Water Monitoring Atlas.

One stretch of river . . . One piece of junk at a time . . .  
Help make a difference . . . Join us . . . 107-mile trek on  
the Des Moines River from Prospect Park south of  
Humboldt to Parkersburg. One stretch  
of river . . . Help make a  
difference . . . Des Moines  
River from Prospect Park  
Park south of Humboldt to Prospect Park  
in Des Moines . . . One piece of junk at a time . . . Join us

The logo is an oval shape with a light brown background. The word "PROJECT" is written in a large, bold, black, sans-serif font along the top curve. The word "A.W.A.R.E." is written in a large, bold, black, sans-serif font along the bottom curve. In the center, there are two black silhouettes of kayakers in a boat, one above the other. Below the kayakers, the text "A Watershed Awareness River Expedition" is written in a smaller, black, sans-serif font.

**JUNE 19-26, 2004 ♦ DES MOINES RIVER**

website: [www.iowadnr.com/volunteer/04aware.html](http://www.iowadnr.com/volunteer/04aware.html)

## ...from IOWATER'S Coordinator

Last June, during National Rivers Month, volunteers gathered at Backbone State Park to embark upon a seven-day river trek that removed 109 tires, 91 bags of trash, 20 barrels, and more, from the Maquoketa River. **Project AWARE** (A Watershed Awareness River Expedition) gives all Iowans a chance to experience the bounty of one of our most precious resources – water – and to make a difference.

This year, from June 19<sup>th</sup> to the 26<sup>th</sup>, 150 volunteers will make the 107-mile trek on the Des Moines River from Gotch State Park south of Humboldt to Prospect Park in Des Moines as part of the 2nd Annual Project AWARE. These die-hard Iowans will spend their time slogging through mud, wrenching canoes over sand bars and shallow riffles, and spending their vacations dungy, drenched, and dead tired.

Although canoes and kayaks will be overburdened with junk each day and the river will look better by the week's end, the true impact of AWARE lies in the education, involvement, and understanding of the volunteers – citizens who have the power to protect, preserve, and cherish Iowa's natural resources. As Henry David Thoreau once stated, "Heroes are often the most ordinary of men [women]." Ordinary people doing ordinary things – floating the river, watching wildlife, monitoring water quality, and cleaning up the Iowa's rivers – one stretch of river, one piece of junk at a time.

Participation is limited, and pre-registration is required. For registration forms and other information, please visit us on the Web at: [www.iowadnr.com/volunteer/04aware.html](http://www.iowadnr.com/volunteer/04aware.html).

We'll see ya' on the river!

*Brian Soenen*

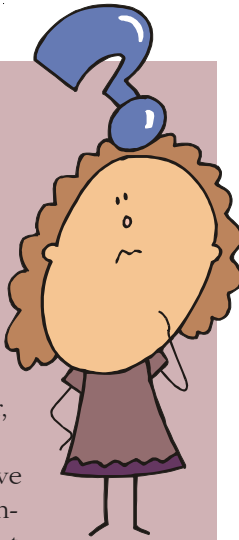
**Brian Soenen**

## Need help in choosing a site to monitor?

by **Kristie Raymond**

All citizens involved in the IOWATER program want to protect and improve Iowa's water quality; however, some would like guidance on where to begin. We would love to provide sites for each volunteer, but realistically we are not the most knowledgeable about the water resources in their local areas. Therefore, primary contacts have been established for some counties to help volunteers choose a monitoring location. Our goal is to have one primary contact for each of Iowa's 99 counties. A list of county contacts can be found at [www.iowater.net](http://www.iowater.net) under the "Workshops" menu. If there is not a contact, but you or someone you know would be interested in representing your county, please contact Kristie Raymond. We appreciate everyone who has chosen to represent their counties and aid their peers in locating monitoring sites.

**Thank you!**



## IOWATER Volunteer Water Quality Monitoring

Iowa Department of Natural Resources  
Wallace State Office Building, 502 E. 9th Street  
Des Moines, IA 50319-0034

**Brian Soenen**, IOWATER Coordinator  
brian.soenen@dnr.state.ia.us phone: (515) 281-6640

**Jacklyn Neely**, IOWATER Field Coordinator  
jacklyn.neely@dnr.state.ia.us phone: (515) 281-4476

**Kristie Raymond**, Program Assistant  
kristie.raymond@dnr.state.ia.us phone: (515) 281-3150

**Lynette Seigley**, Research Geologist  
lseigley@igsb.uiowa.edu phone: (319) 335-1598

IOWATER Web Site: [www.iowater.net](http://www.iowater.net)

## Update Your Volunteer Profile . . .

Have you moved, gotten a new email address, or is your name spelled wrong on your newsletter? If so visit [www.iowater.net](http://www.iowater.net); select "Database", "Online Database", "Submit Data"; and log-in with monitor ID and password. Then you can select "Edit Personal Profile" to change your address, email, fax number, phone number or even your name. After making your changes hit the "Update Profile Information" button (just once) and then hit the "Exit" button to close the window . . . **That's all there is to it!**

## IOWATER 2004 Advanced Workshops

*You must have attended a Level 1 workshop to participate in an advanced workshop.*

The advanced workshops remaining in 2004 are: ● **Benthic Macroinvertebrate Indexing**  
● **Bacteria Monitoring**

The workshop registration fee is \$10 for each of the advanced workshops. To register for any of these IOWATER workshops, please fill out and send in the registration form below. You will be sent confirmation, maps, and more information when paid registrations are received. Checks should be made payable to the Iowa DNR.

### IOWATER Advanced Workshop Registration Form

#### ● **Benthic Macroinvertebrate Indexing (place check by workshop you wish to attend)**

Date	Time	Location
___ April 3*	9:30 AM- 2 PM (lunch provided)	Mahaska County Conservation Center, at the Russell Wildlife Area (New Sharon)

\*following this workshop there will be a Lake Update Workshop, anyone who has attended Level One workshop can attend (there is no extra fee). Indicate if you wish to attend YES NO

___ May 1	2-6 PM	McFarland Park (Ames)
___ August 21	8 AM -12 PM	Jones County (Central Park Nature Center)

#### ● **Bacteria Monitoring (place check by workshop you wish to attend)**

Date	Time	Location
___ April 17	3-6 PM	Crown Point Center (Johnston)

Name \_\_\_\_\_ Organization \_\_\_\_\_

Address \_\_\_\_\_  
Street or PO Box \_\_\_\_\_ City State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone: (day) \_\_\_\_\_ (evening) \_\_\_\_\_

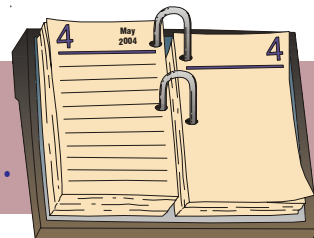
E-Mail \_\_\_\_\_

Make check out to Iowa DNR (\$10 for each advanced workshop).  
Questions: contact Jackie at (515) 281-4476 or [Jacklyn.neely@dnr.state.ia.us](mailto:Jacklyn.neely@dnr.state.ia.us)

Send To: **Jackie Neely, Iowa DNR – Wallace Office Bldg., 502 East 9<sup>th</sup> Street, Des Moines, IA 50319**

# Upcoming Events

... snapshot sampling & more.



**April 17** (Sat); O'Brien County Snapshot  
Contact: Scott Osborn (712) 757-3835  
Scott.osborn@ia.usda.gov

**April 17** (Sat); Cedar Lake Snapshot  
Contact: Lisa Walters (515) 462-2961  
Lisa.walters@ia.usda.gov

**May 1** (Sat); Whitebreast Watershed Snapshot  
Contact: Anne Hildebrand (515) 961-5264  
Anne.hildebrand@ia.usda.gov

**May 8** (Sat); Wapsi River Watershed Snapshot  
Contact: Vicki Wilson (319) 827-1690 mvw@jtt.net

**May 15** (Sat); IOWATER Spring Statewide Snapshot  
Contact: Lynette Seigley (319) 335-1598  
lseigley@igsb.uiowa.edu

**May 18** (Tue); Muscatine County Snapshot  
Contact: Matt McAndrew (563) 263-7944  
Matt.mcandrew@ia.usda.gov

**May 25** (Tue); Scott County Snapshot  
Contact: Carol Border (563) 326-6150  
cjb@ci.davenport.ia.us

**May 26** (Wed); Polk County Snapshot  
Contact: Susan Heathcote (515) 244-1194  
Heathcote@earthweshare.org

**Late May / Early June**  
Old Mans Creek Watershed Snapshot  
Contact: Dave Ratliff (319) 354-1397 day;  
(319) 337-4445 evening or oldmanscreek@quest.net

**June 5** (Sat); Cedar River Watershed Snapshot  
Contact: Lynette Seigley (319) 335-1598  
lseigley@igsb.uiowa.edu

**August 7** (Sat); Cold Water Stream Snapshot  
Contact: Steve Veysey (515) 232-4635  
sveysey@iastate.edu – Complete information will  
be available at [www.hawkeyeflyfishing.com](http://www.hawkeyeflyfishing.com)

## IOWATER 2004 Level 1 Workshop Schedule

Date	Location	Contact	Phone	E-mail
April 16-17	Johnston	Steven Witmer	(515) 727-7765	switmer@ci.johnston.ia.us
<i>This workshop will be followed by a 4-hour Bacteria Monitoring workshop (April 17, 2-6 pm), contact for details.</i>				
April 23-24	Jefferson Co.	Jack Eastman	(641) 469-5760	jacktoni@kdsi.net
April 30- May1	Ames	Jerry Keys	(515) 232-2516	jkeys@storycounty.com
<i>This workshop will be followed by the 4-hour Benthic Macroinvertebrate Indexing workshop (May 1 2-6 pm), contact for details.</i>				
May 7-8	Quad Cities	Carol Border	(563) 326-6150	cjb@ci.davenport.ia.us
June 4-5	Worth County	Jeremy Johannsen	(641) 584-2211	Jeremy.Johannsen@ia.usda.gov
June 11-12	Wright County	Charlie Bray	(515) 532-3185	cbray@co.wright.ia.us
July 9-10	Burlington	Kim Perlstein	(319) 753-5808	starcave@interl.net
July 16-17	Lewis	Andria Cossolotto	(712) 243-6665	acossolotto@casscoia.us
July 30-31	Oxford	Brad Freidhof	(319) 645-1011	bfreidhof@co.johnson.ia.us
August 12-13	Ida County	Steve Hummel	(712) 364-3300	mshummel@netins.net or idaccb@pionet.net
Sept. 10- 11	Clayton County	Eric Palas	(563) 245-1713	eric.palas@ia.usda.gov

### Atlas (cont)

default button selected when you first enter the site. After selecting the “Zoom In” button, click on the map with your mouse. The map will zoom in to the place you just clicked.

By zooming in closer than 1:25,000 scale, all data layers available will be displayed in the layers list on the left side of the page. At the bottom of this list are three valuable data layers: land cover of Iowa from the year 2000, 1:24K topographic maps, and 2002 color infrared air photography. To make the air photography layer visible, activate the checkbox next to the layer name and click the yellow “Redraw Map” button below the legend. With this layer visible you can see fields, roads, houses, etc. as they were in the spring of 2002. To view topographic maps or landuse maps, use the same procedure and select the respective layers.

More features, tools, and buttons are available in the Iowa Water Monitoring Atlas. These include: a **Measure** tool for measuring distance, a **Locate Address** tool to find a street address and zoom to it on the map, a select scale feature to zoom to a defined scale, and a **Print** button that allows you to print your own map complete with a legend, scale bar, and a title of your choice. To get information on how to use all of the features in this website, click on the “Help” link, located at the top of the website in bold white text.

Using new internet map technology, the Iowa Water Monitoring Atlas makes it easy for anyone to access spatial data. Before this technology, expensive mapping software, large amounts of data, and necessary GIS/computer training were needed to use the information provided in the Atlas. Now a computer and the internet access are the only requirements. It is recommended, however, that you use a current version of Internet Explorer as your web browser, and that you have at least a 56K dial-up internet connection – the faster connection you have, the less patient you have to be when using the Atlas. Also visit the Atlas through the IDNR website at [www.iowadnr.com](http://www.iowadnr.com). Click on the “Interactive Mapping” link on the left and choose the “Water Monitoring” link. Visit the Atlas yourself to see how it works.



## IOWATER Action!

*Press releases, events, & news articles involving IOWATER monitors – Many thanks to all of you for your continued efforts.*

- **Dubuque County** – Catfish Creek Coalition shared their Statewide Snapshot Event with Iowa Public Television’s *Living in Iowa*.
- **Howard County** – Riceville FFA members received an Environment First Grant from the Iowa Farm Bureau for their participation in the IOWATER program.
- **Kossuth County** – Algona High School Advanced Biology students sampled the East Fork of the Des Moines River with the help of waders donated by Prestage-Stoecker Farms.
- **O’Brien County** – Gartley-Melvin-Sanborn 8th grade Earth Science class participated in the O’Brien County snapshot.
- **Polk County** – Johnston Middle School and teachers Debra Lyons and Lisa Horsch involved 8th graders in the IOWATER program.
- **Story County** – The Squaw Creek Watershed Coalition included the IOWATER Statewide snapshot as part of their annual meeting.
- **Statewide** – IOWATER/snapshot data from 9/18/03 to 10/18/03 was submitted to America’s Clean Water Foundation and the International Water Assoc. as part of World Water Monitoring Day. **With 643 sites monitored, Iowa is number one in the nation. Congratulations to all participants!**

**Compiled by Jacklyn Neely, IOWATER Field Coordinator**  
*If we missed your happenings, please call or email Jackie with an update.*

# Volunteer Viewpoints

... in their own words.



## Preserving the Lizard article and photo by Ben Petty



*IOWATER photographs indicate very high water clarity.*

If you were hoping for a herpetology lesson, you've come to the wrong place. The "Lizard" in this case refers to the creek and its south branch, which converge near Fort Dodge. Although little noticed by many who cross its path, the sections of Lizard creek that flow through Webster County have become increasingly popular with Iowa paddlers, who are drawn to the riffle/rapids areas created by the rocky course and rapidly flowing waters that exist along its final several miles before being swallowed up by the Des Moines River. There are IOWATER monitoring sites along both branches of Lizard Creek, and monitoring played an instrumental role in preventing a

channelization project that would have resulted in the loss of over 1,100 feet of channel by straightening a portion of the creek.

In denying a permit for the proposed channelization, the Environmental Protection Agency cited the tendency for channelization to have adverse impacts on aquatic life, cause lower than natural base low flows and higher than natural high flows, and included the following:

**"We recently located relevant data and information on the IOWATER Stream Monitoring website, including water quality, benthic macroinvertebrate species, and photographs."**

**"The sampling results indicate that the stream supports an assemblage of aquatic life indicative of high water quality conditions. The assemblage includes caddisflies, mayflies, riffle beetles, stoneflies, and snails. These species are important in sustaining a food web that supports downstream sport fisheries"**

**"Further, specific IOWATER photographs indicate very high water clarity."**

The EPA went on to suggest alternatives, such as a riparian buffer strips, with possible support from the USDA Buffer Program.

In my opinion, IOWATER data was crucial in this decision, and will have a positive effect on those organisms – both human and aquatic – that use this unique part of Iowa.

## The Onsite Wastewater Systems Assistance Program (OSWAP) by Steve Hopkins



*Des Moines Register photo by Harry Baumert.*

*Homeowner Ken Miller, from Washington, inspects his new septic tank and effluent filter under his son's close supervision.*

The DNR's Onsite Wastewater Systems Assistance Program (OSWAP) is helping rural Iowans replace their inadequate or failing septic systems in an effort to help clean up polluted waterways statewide. Since beginning in 2002, the program has helped finance the replacement of 159 septic systems, totalling \$900,000, at an average cost of \$5,500 per loan.

OSWAP offers low-interest loans to homeowners at 3%, for amounts of between \$2,000 and \$10,000, for a maximum repayment period of 10 years. Loan applicants must be credit-worthy and apply for a loan through participating lenders. The program limits eligibility to owners of existing homes only, in unincorporated areas not served by a public sewer.

The program was created to help replace outdated septic systems in Iowa that still dump untreated wastewater from household septic tanks to open ditches or underground tile lines that flow directly into streams, rivers, lakes, or fractured bedrock. Inadequate and failing septic systems contribute to the pollution of wells, groundwater, and surface waters with fecal bacteria, viruses, and nutrients.

An estimated 100,000 septic systems in Iowa are at substandard levels. And many landowners with those systems may not realize their systems are breaking the law. According to Iowa law, all septic systems, regardless of when they were installed, must have secondary wastewater treatment following the septic tank.

Homeowners wanting to apply for an OSWAP loan must first obtain a septic construction permit from their county sanitarian and complete an OSWAP approval form. Next, they apply for a loan through a participating lender. If their loan is approved, the final step is to hire a septic contractor to complete the approved project.

OSWAP is funded through a revolving loan fund created by state appropriations and the U. S. Environmental Protection Agency Clean Water Act.

For more information, contact Steve Hopkins, Iowa DNR environmental specialist, at (515) 725-0346, or your county sanitarian. For online information, see the program webpage at: [www.onsiteiowa.com](http://www.onsiteiowa.com)

We'd like to hear from you, so send us a note... about your IOWATER activities, thoughts, and ideas ...in your own words.